

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: IMPELLIZZERI, Frederic

SERIAL NO.: 10/530,683

ART UNIT: 3733

FILED: September 02, 2005

EXAMINER: Hoffman, M. C.

TITLE: SELF-LOCKING OSTEOSYNTHESIS DEVICE

Amendment D: REMARKS

Upon entry of the present amendments, Claims 1 -18 and 24 have been previously canceled, Claim 22, and 27 are canceled in the present amendment, and Claims 19-21, 23, 25-26 and 28 are currently pending. The independent Claims 19, 26, and 28 have been amended. Reconsideration of the rejections, in light of the forgoing amendments and present remarks, is respectfully requested. The present amendments have been entered for the purpose of distinguishing the present invention from the prior art.

In the Office Action, it was indicated that Claims 19-23 and 25-28 were rejected under 35 U.S.C. § 103(a) as being obvious over the Buhler patent in view of the Dixon patent and the Frigg patent. There was a rejection under 35 U.S.C. §112, first paragraph for failing to comply with the written description requirement.

As an overview to the present reply, independent Claims 19, 26, and 28 have each been amended to more accurately define the features of the invention, which are not shown nor suggested by the cited prior art combination. In particular, the limitations of Claim 22 and 27 have been incorporated into both independent Claims 19 and 26. The holes are tapered, not the inserts. These amendments also resolve the 35 U.S.C. §112, first paragraph rejection.

Additionally, the inventive inserts with a greater uniform width for mechanical engagement on the surface of the plate are now clearly recited in the claim language. This subject matter of the

shape of the extended width is disclosed in the drawings through Figures 1-3 and 4-7. This structural relationship between the inserts and openings is not anticipated nor made obvious by the prior art combination, in particular the Dixon reference. The inserts have a uniform width over the plate, such that this lip of the insert is not being used for guiding purposes. The lip of the Dixon inserts are shaped and slanted and asymmetric to provide guidance for the insert angle of screws. These prior art inserts are not interchangeable, and they do not maintain the planar surface of the plate. Because the osteosynthesis device is going to be implanted within a living person, the present invention claims these structures for significant improvement in application. No new matter has been added by this amendment.

Furthermore, the independent claims have been amended to more clearly recite the self-tapping relation to the fixed position of the inserts when screws are angularly received in the openings. The subject matter of self-tapping is known; however, the claim language now recites an inventive variation that is not disclosed by the prior art combination, particularly the Frigg patent. Each independent claim now recites an embodiment of this inventive feature. The conical head of the tapping screw will have an outer thread in fixed engagement with the osteosynthesis device. The difference between the prior art combination and the present invention is that the conical threads are predetermined, while the wall threads are irregular as determined by the angular receiving by the insert. The Frigg patent discloses matching threads to adjust for errors in screw alignment, such that the threads can match between the screw and the plate hole for full alignment or match for just one thread (See Frigg patent, col. 1, ll.31-33) for misalignment. In contrast, the screws in the present invention are intended to be inserted at variable angles and require interchangeability for each insert and for each angle. The wall threads may be irregular, but a full and secure threaded connection is

made, unlike the prior art combination. The present invention now accurately claims the tapping screws as different from the prior art combination. The screw threads are self-tapped into bone tissue underneath the plate, while the conical threads are similarly self-tapped into the inner wall of the insert. These features are not made obvious by the conical threads of the combination with the Frigg patent.

Independent Claim 28 has also been amended to correct the 35 U.S.C. §112, first paragraph objection related to the hole having a conical-type shape.

With respect to the prior art rejections, Applicant respectfully contends that prior art combination of the Buhler patent in view of the Dixon patent and Frigg patent no longer makes the present invention obvious. The holes, inserts, and screws are now accurately claimed and are not disclosed by the prior art combination.

Based upon the foregoing analysis, Applicant contends that independent Claims 19, 26 and 28 are now in proper condition for allowance. Additionally, those claims which are dependent upon these independent claims should also be in condition for allowance. Reconsideration of the rejections and allowance of the claims at an early date is earnestly solicited. Since no new claims have been added above those originally paid for, no additional fee is required.

Respectfully submitted,

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Date	John S. Egbert; Reg. No. 30,627
	Andrew W. Chu; Reg. No. 46,625
Customer No. 24106	Egbert Law Offices
	412 Main Street, 7th Floor
	Houston, Texas 77002
	(713)224-8080
	(713)223-4873 fax